

DOCKET NO. 132258 CMI-0001-100**PATENT**

Serial No. 10/735,995

Response to Office Action dated June 23, 2004

Remarks

Claims 1-12 and 14-18 are in the case. Claim 13 is cancelled.

The courtesies extended by Examiner Frantz F. Jules in granting a telephone interview with Brian L. Belles, attorney for applicant, on August 9, 2004 are noted with appreciation. During the interview, the merits of the rejections of the claims over U.S. Patent 254, 693 ("Reed") set forth in the June 23, 2004 Office Action were discussed. Specifically discussed was whether Reed taught or suggested "a connection plug extending from the body of a crossing frog for connecting to a running rail, wherein the connection plug has a cross-sectional profile that is substantially identical to a cross-sectional profile of the running rail to which it will connect," as is required by claims 1 and 15. Mr. Belles pointed out that the crossing frog of Reed did not have (or suggest) this claimed feature. In response, Examiner Jules stated that a welded junction of two I-shaped cross-section beam rails in a frog casting would meet the claim limitation. Mr. Belles further disagreed with Examiner Jules' interpretation of the Reed reference and pointed out that he was modifying and adding to the teachings of the Reed reference through his own knowledge in order to reconstruct the Applicant's invention. Mr. Belles stated that this reconstruction was the result of impermissible hindsight. Thus, contrary to the assertion made in the Interview Summary of September 2, 2004, agreement was not reached. Examiner Jules instructed Mr. Belles to submit his arguments in a formal response to the June 23, 2004 Office Action. Accordingly, this Reply is submitted.

Claim Rejections - 35 U.S.C. § 112

In paragraphs 1-2 of the Office Action, claims 10-12, 14, and 18 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, it was stated that the claim language "the first and fourth points being at flangeway depths so as to avoid contact with a flange of train wheel passing through the flangeway; wherein upon the train wheel entering the flangeway, the flange of the train wheel initially contacts the floor at a point on the first arc; and wherein upon the train wheel exiting the flangeway, the flange of the train

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wheel disengages the floor at a point on the third arc" is confusing and contradictory because the claim calls for the first and fourth points to be at flange depth so as to avoid contact with the flange of a train wheel passing through, and the claim also recites that "the flange of the train wheel initially contact at a point on the first arc."

This claim language, present in claims 10, 12, 14, and 18, has been amended to clarify that the surface of at least one the flangeway floors has a convex cross-section that comprises three interconnecting arcs. The Office Action states that the claim language is contradictory because the claim recites that the first point and the fourth point are at a depth so as to avoid contact with the flange of a train wheel passing through, but at the same time the claim also recites that the flange of the train wheel initially contact at a point on the first arc. However, this language is not contradictory. The claim language merely requires that the first point (which is the beginning of the first arc) and the fourth point (which is the end of the third arc) be at a depth to avoid contact with the flange of a train wheel passing through. The first arc extends a length, from the first point to the second point, thus, it is possible for the flange of a train wheel to contact the first arc upon entering the flangeway without contacting the first point.

Regarding the statement that it is confusing as to what particular structure applicant is referring to by "a point on the first arc." The claim language has been amended in claims 10, 12, 14, and 18 to clarify that the wheel contact the first arc. The language "a point on" has been removed for clarity. If it is still felt that the claim language is confusing in any manner, it is respectfully requested that a review of paragraphs 39-41 of the present specification be undertaken in view of Figure 6.

It is believed that all of the rejections under 35 U.S.C. § 112, second paragraph, have been overcome and should be withdrawn.

Allowable Subject Matter

In paragraph 8 of the Office Action, claim 3 is object for being dependant upon a rejected claim but has been indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim. Accordingly, claim 3 is amended to

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be in independent form, incorporating all of the limitation of its base claims, claim 1, and intervening claim, claim 2. It is believed that claim 3 is now in condition for allowance.

In paragraph 9 of the Office Action, claims 10-12, 14, and 18 are indicated as being allowable if rewritten to overcome the rejections under 35 U.S.C. § 112 and to include all of the limitations of the base claim and any intervening claim. Claims 10, 12, 14, and 18 are amended accordingly. It is believed that claims 10, 12, 14, and 18 are now in condition for allowance.

Claim Rejections Under 35 U.S.C. §§ 102 and 103

In paragraphs 3-4 of the Office Action, claims 1-2 and 5-6 were rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent 254,693 ("Reed"). Specifically regarding claim 1, Reed is cited as disclosing "a railroad frog apparatus for connecting intersecting railroad lines comprising a body having flangeways (C) that intersect as shown on the top surface; and at least one connection plug (S) extending from the body for connecting to a running rail; the at least one connection plug having a cross-sectional profile that is substantially identical to a cross-sectional profile of the running rail." However, as described, below, this assertions is incorrect and, thus, the rejection of claim 1 over Reed is improper.

While Reed does disclose various embodiments (B-B") of a railroad frog for connecting intersecting rail lines, none of the railroad frogs of Reed have a connection plug for connecting a running rail that extends from the body and has a cross-sectional profile that is substantially identical to a cross-sectional profile of the running rail, as is required by claim 1. Instead, the crossing frogs (B-B") of Reed have indented sockets S for receiving running rails to be connected to the frogs. See Reed, Figures 2-5 and Col. 1, Ll. 7-10. While the sockets S are shaped so as to have a transverse section that is the precise counterpart of that of the running rails D that are jammed therein, the sockets are indented into the body. The sockets do not extend from the body of the crossing frog, as is required by claim 1.

Moreover, while portions of the crossing frogs (B-B") of Reed do extend from the body to form the sockets S, none of these portions have a cross-sectional profile that is substantially identical to a cross-sectional profile of the running rail, as is required by claim 1. Reed

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exemplifies the running rails that connect to each frog (B-B") as I-beam rails. As can be clearly seen from the figures in Reed, none of the portions extending from the body of frogs (B-B") have a cross-sectional profile that even resembles an I-beam.

Therefore, Reed does not teach or fairly suggest a crossing frog apparatus having a connection plug for connecting a running rail that extends from the body and has a cross-sectional profile that is substantially identical to a cross-sectional profile of the running rail, as is required by claim 1. None of the other cited prior art references supply this deficiency. Accordingly, the rejection of claim 1 under 35 U.S.C. § 102(b) is improper and should be withdrawn.

Regarding the statement in the September 2, 2004 Interview Summary that "any welded junction of two I-shaped cross-section beam rails in a frog casting for example would meet the claim limitation," it is unclear what is meant. However, the Examiner has not cited any prior art in support of such a position. Moreover, even if prior art showing two I-beams welded together was produced, such a disclosure would not anticipate or make obvious the invention of claim 1 which requires "a body having flangeways that intersect."

Regarding the rejection of claim 6, claim 6 was rejected under 35 U.S.C. § 102(b) as being anticipated by Reed. Claim 6 depends on claim 1 and further recites that the crossing frog apparatus "is formed from a single piece of material." Because claim 6 depends on claim 1, for the reasons discussed above, claim 6 is also patentable over the prior art of record. Moreover, even if prior art supporting the statement in the September 2, 2004 Interview Summary that "any welded junction of two I-shaped cross-section beam rails in a frog casting for example would meet the claim limitation" was cited, this prior art would not anticipate or make obvious claim 6. Claim 6 requires that the crossing frog apparatus be "formed from a single piece of material." A crossing frog having a piece of I-beam rail section bolted or welded to the body of the crossing frog does not meet this limitation.

Regarding paragraph 6 of the Office Action, claims 4, 15, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Reed in view of European Patent 0602728A1 ("Connelly"). Specifically, the Office Action states that Reed teaches "all of the limitations of

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claims 4, 15-16 except for a railroad frog apparatus comprising at least one connection plug where the rail is connected to the rail by a thermite weld. The general concept of providing a weld for connecting rails to a frog assembly is well known in the art as illustrated by Connelly which discloses the teaching of a thermite weld for joining rails and frogs, see page 2, lines 1-2." The Office Action further states that it would have been obvious to one of ordinary skill in the art the time of the invention to modify Reed to include the use of connecting the rail to the frog by a thermite weld as taught by Connelly in order to achieve increased fatigue resistance in the joint." In addition to the reasons set forth above with respect to claim 1, the rejections of claims 4, 15, and 15 are improper because Reed is not properly combinable with Connelly to supply the noted deficiencies.

The crossing frog of Reed is specifically designed to eliminate the need for other fastening, such as welding, of the rails to the frog in addition to its tight fit socket S insertion method. As mentioned above, a running rail is connected to the Reed crossing frog by inserting an end of the running rail into one of the sockets S so as to form a tight jam "that hold the [rails] firmly in place without other fastening." See Reed, Figure 2 and Col. 2, Ll. 70-78. Thus, Reed teaches away from incorporating other fastening means, such as welding, to hold the rails in place. Therefore, the combination of Reed with Connelly is improper.

Specifically regarding claim 4, one skilled in the art would not be motivated to modify the crossing frog of Reed to have "at least one connection plug that extends from the body a distance that allows the running rail to be connect by a thermite weld," as is required by claim 4.

Specifically regarding claims 15 and 16, one skilled in the art would not be motivated to modify the connection method disclosed in Reed to include the steps of "butting the running rails against the corresponding connection plug; and welding each running rail to the connection plug it is butted against," as is required by claims 15 and 16.

Thus, for the reasons discussed above, the rejections of claims 4, 15, and 16 are improper and should be withdrawn.

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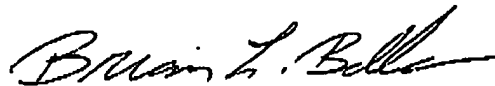
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It is believed that the all grounds of rejection and objection have been traversed or obviated, and that all of the rejections and objections should be withdrawn.

COZEN O'CONNOR



BY: BRIAN L. BELLES

Reg. No. 51,322

Cozen O'Connor

The Atruim

1900 Market Street

Philadelphia, PA 19103

Telephone 215 665-7244

Facsimile 215 701-2044

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BLB/kf